Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(currently amended)** A layer jump control apparatus for controlling a layer jump process of an optical drive, wherein the layer jump process comprises a kicking process, a holding process, a braking process and a waiting process, the layer jump control apparatus comprising:

a pick up head having a lens and a voice coil motor, wherein the pick up head drives the voice coil motor in accordance with a driving force to vertically move the lens;

a preamplifier for producing a focusing error signal;

a controller for receiving the focusing error signal and producing a focusing control signal;

a low pass filter for continuously receiving the focusing control signal and producing a layer distance balancing signal; and

a driving device for outputting the driving force;

wherein:

the driving device receives the focusing control signal to determine the driving force when the optical drive does not perform the layer jump process;

the driving device receives a kicking signal and the layer distance balancing signal to determine the driving force when the optical drive performs the kicking process;

the driving device receives a braking signal and the layer distance balancing signal to determine the driving force when the optical drive performs the braking process; and

the driving device receives the layer distance balancing signal to determine the driving force when the optical drive performs the holding process and the waiting process.

2. **(original)** The layer jump control apparatus according to claim 1, wherein the optical drive is a DVD drive.

3. **(original)** The layer jump control apparatus according to claim 1, wherein the controller is an equalizer.

4. **(original)** The layer jump control apparatus according to claim 1, wherein the layer distance balancing signal is a direct current voltage level of the focusing control signal.

5. **(currently amended)** An optical drive for performing a layer jump process, wherein the layer jump process comprises a kicking process, a holding process, a braking process and a waiting process, the optical drive comprising:

a pick up head having a lens and a voice coil motor, wherein the pick up head drives the voice coil motor in accordance with a driving force to vertically move the lens;

a preamplifier for producing a focusing error signal;

a controller for receiving the focusing error signal and producing a focusing control signal;

a low pass filter for continuously receiving the focusing control signal and producing a layer distance balancing signal; and

a driving device for outputting the driving force;

wherein:

the driving device receives the focusing control signal to determine the driving force when the optical drive does not perform the layer jump process;

the driving device receives a kicking signal and the layer distance balancing signal to determine the driving force when the optical drive performs the kicking process;

the driving device receives a braking signal and the layer distance balancing signal to determine the driving force when the optical drive performs the braking process; and

the driving device receives the layer distance balancing signal to determine the driving force when the optical drive performs the holding process and the waiting process.

6. **(original)** The optical drive according to claim 5, wherein the optical drive is a DVD drive.

7. **(original)** The optical drive according to claim 5, wherein the controller is an equalizer.

8. **(original)** The optical drive according to claim 5, wherein the layer distance balancing signal is a direct current voltage level of the focusing control signal.

9. **(currently amended)** A method of controlling an optical drive to perform a layer jump process, wherein the optical drive comprises a vertically movable pick up head, a preamplifier, a controller, and a low pass filter, the method comprising the steps of:

receiving a focusing error signal produced by the preamplifier in the controller to produce a focusing control signal;

continuously sending the focusing control signal to the low pass filter to produce a layer distance balancing signal;

performing a kicking process in accordance with a kicking signal and the layer distance balancing signal;

performing a holding process in accordance with the layer distance balancing signal;

performing a braking process in accordance with a braking signal and the layer distance balancing signal; and

performing a waiting process in accordance with the layer distance balancing signal.

10. **(original)** The method according to claim 9, wherein the optical drive is a DVD drive.

11. **(original)** The method according to claim 9, wherein the controller is an equalizer.

12. **(original)** The method according to claim 9, wherein the layer distance balancing signal is a direct current voltage level of the focusing control signal.